

G a b r i e l A . V e c c h i

Research Interests

Tropical air/sea interaction.

Ocean/atmosphere dynamics and coupling.

Sub-seasonal ocean/atmosphere variability in the tropics, and its role in seasonal and interannual variability.

Education

Ph.D. Physical Oceanography

Apr., 2000 University of Washington Seattle, WA

Thesis title: "Sub-seasonal wind variability and El Niño"

M.S. Applied Mathematics

Feb. 1999 University of Washington Seattle, WA

M.S. Physical Oceanography

Dec. 1996 University of Washington Seattle, WA

B.A. Mathematics

May 1994 Rutgers University New Brunswick, NJ

Professional experience

Nov 2003 – Present UCAR Visiting Scientist Princeton, NJ

University of Washington, Joint Institute for the Study of the Atmosphere and Oceans

Sep 2004 – Jan 2005 Lecturer New Brunswick, NJ

Rutgers University, Atmospheric Thermodynamics.

May 2001 – Nov 2003 Research Scientist Seattle, WA

University of Washington, Joint Institute for the Study of the Atmosphere and Oceans

May 2000 – April 2001 Postdoctoral Research Associate Seattle, WA

University of Washington, Department of Atmospheric Sciences / Joint Institute for the Study of the Atmosphere and Oceans

Sep. 1994 – April 2000 Research Assistant Seattle, WA

University of Washington, School of Oceanography / Joint Institute for the Study of the Atmosphere and Oceans

Sep. 1995 – Dec. 1995 Teaching Assistant Seattle, WA

University of Washington. Oceanography 504 – Fluid Dynamics.

Oct. 1993 – Sept 1994 Research Assistant New Brunswick, NJ

Institute for Marine and Coastal Sciences, Rutgers University

Summer 1993 Summer Research Fellow New Brunswick, NJ

Institute for Marine and Coastal Sciences, Rutgers University

Awards received	Presidential Early Career Award for Scientists and Engineers (PECASE) 2004-2009.
	NASA Space Grant Scholarship, 1994-1996.
	Cook College, Rutgers University Marine Sciences Student of the Year, 1994.
	New Jersey Department of Education Garden State Scholar Scholarship, 1990-1994.
Professional Organizations	American Geophysical Union.
	American Meteorological Society.
Computer Experience	UNIX, Windows and Macintosh operating systems.
	Extensive programming experience with Fortran. Experience with C, C++, HTML and Perl Script. Experience with UNIX scripting utilities: sed, awk.
	Experience with Matlab, Ferret, Microsoft Office, Adobe Photoshop, Illustrator and Pagemaker, and Corel Freehand.
Languages	Fluent in Spanish (lived in Venezuela from age 1 to 14) and Italian. Working knowledge of French.
Interests and activities	Ultimate frisbee, soccer, snowboarding, mountain biking, SCUBA.

Publications

- Vecchi, G.A., A.T. Wittenberg and A. Rosati (2005). Reassessing the role of stochastic forcing in El Niño. *Geophys. Res. Lett.* (in prep.)
- Song, Q.S., G.A. Vecchi, and A. Rosati (2005). Indian Ocean Variability in the GFDL CM2 Coupled Climate Model. *J. Climate* (in prep.)
- Harrison, D.E., R.D. Romea, and G.A. Vecchi (2005). On the Seasonal Cycle of the Equatorial Pacific: Wind stress, heat flux and self-consistency. *In preparation*
- Vecchi, G.A. (2005). The termination of the 1997-98 El Niño. Part II: Mechanisms of Atmospheric Change. *J. Climate* (Submitted).
- Vecchi, G.A., and D.E. Harrison (2005). The termination of the 1997-98 El Niño. Part I: Mechanisms of Oceanic Change. *J. Climate* (Submitted).
- Gnanadesikan, A. et al., (2005): GFDL's CM2 global coupled climate models - Part 2: The baseline ocean simulation, *J. Climate* (Submitted).
- Bhat, G. S., G. A. Vecchi and S. Gadgil (2004). Sea Surface Temperature of the Bay of Bengal derived from TRMM. *J. Mar. Tech.*, **21**, 1283-1290.
- Vecchi, G.A., and D.E. Harrison (2004): Interannual Indian rainfall variability and Indian Ocean sea surface temperature anomalies. In *Earth Climate: The Ocean-Atmosphere Interaction*, C. Wang, S.-P. Xie, and J.A. Carton (eds.), American Geophysical Union, Geophysical Monograph 147, Washington D.C., 247–260
- Vecchi, G.A., and N.A. Bond (2004): The Madden-Julian Oscillation (MJO) and northern high latitude wintertime surface air temperatures. *Geophys. Res. Lett.* **31**, L04104, doi:10.1029/2003GL018645.
- Vecchi, G.A., S.-P. Xie, and A. Fischer (2004). Air-Sea Coupling over Western Arabian Sea Cold Filaments. *J. Climate*, **17**(6), 1213–1224.
- Vecchi, G.A. and D.E. Harrison (2003). On the termination of the 2002-3 El Niño event. *Geophys Res. Lett.*, **30**(18), 1964-1967.
- Bond, N.A., and G.A. Vecchi (2003). On the Madden Julian Oscillation and Precipitation in Oregon and Washington. *Weather and Forecasting*, **18**(4), 600-613.
- Vecchi, G.A., and D.E. Harrison (2002). Monsoon Breaks and sub-seasonal sea surface temperature variability in the Bay of Bengal. *J. Climate*, **15**(12), 1485-1493.
- Harrison, D.E., R.D. Romea, and G.A. Vecchi (2001). Central Equatorial Pacific Zonal Currents II: The seasonal momentum balances and the boreal spring eastward surface current surge. *J. Mar. Res.*, **59**, 921-948.
- Harrison, D.E., and G.A. Vecchi (2001). January 1999 Indian Ocean cooling event. *Geophys. Res. Lett.* **28**(19), 3717-3720.
- Harrison, D.E. and G.A. Vecchi (2001). El Niño and La Niña: Equatorial Pacific surface temperature and thermocline variability, 1986-98. *Geophys. Res. Lett.*, **28**, 1051-1054.

- Harrison, D.E., G.A. Vecchi and R.H. Weisberg (2000). Eastward surface jets in the central equatorial Pacific. November 1991-March 1992. *J. Marine Res.* **58**, 735-754.
- Vecchi, G.A. (2000). Tropical Pacific sub-seasonal wind variability and El Niño. Ph.D. Dissertation, University of Washington.
- Vecchi, G.A. and D.E. Harrison (2000). Tropical Pacific sea surface temperature anomalies, El Niño and equatorial westerly wind events. *J. Climate*, **13**(11), 1814-1830.
- Harrison, D.E. and G.A. Vecchi (1999). On the termination of El Niño. *Geophys. Res. Lett.* **V.26** (11), 1593-7.
- Vecchi, G.A. and D.E. Harrison (1997). Westerly wind events in the tropical Pacific, 1986-1995: An atlas from the ECMWF operational surface wind fields. NOAA Technical Memorandum ERL PMEL-109 (NTIS PB97-188213).
- Harrison, D.E., and G.A. Vecchi (1997). Westerly wind events in the tropical Pacific, 1986-1995. *J. Climate*, **V.10** (12), 3131-3156.